

REMARKS

Claims 1-8 are pending in the present application. The Office Action and cited references have been considered. Favorable reconsideration and such allowance are respectfully urged.

Claims 1, 3 and 7 are rejected under 35 U.S.C. §102(b) as being anticipated by Mann et al (U.S. Patent No. 5,251,210). Claims 2 and 8 are rejected under 35 U.S.C. §103 as being unpatentable over Mann et al in view of Castellano et al (U.S. Patent No. 5,065,396). These rejections are respectfully traversed for the following reasons.

Claims 1 and 7 have been amended in a similar manner. Claim 1 now recites a method of increasing bandwidth utilization of a transmission channel having a first bandwidth capacity and operative at a first transmission rate comprising the steps of providing at least two input bit streams, each having a transmission rate less than that of the first transmission rate, wherein at least one of said at least two input streams has a plurality of overhead bits associated therewith; dividing the at least two input bit streams into a plurality of sub-streams, each having bandwidth lower than the first bandwidth capacity, wherein the difference between the first bandwidth capacity and a bandwidth capacity of each of the at least two input bit streams is at least equal to the

bandwidth of one of the plurality of sub-streams; selecting a group of sub-streams out of the plurality of sub-streams, which group has a combined bandwidth just lower than the first bandwidth capacity; and wherein the group comprises at least one sub-stream which comprises at least some of the plurality of overhead bits; carrying the selected group of sub-streams over the transmission channel; and assembling the selected group of sub-streams into an output bit stream. This is not taught, disclosed or made obvious by the prior art of record.

According to Applicant's invention, a method and means are provided for transmitting a clear signal having a given bandwidth over a transmission channel which has a bandwidth which is larger than the clear signal, in such a way that does not waste the extra bandwidth capacity of the transmission channel. The input streams each have a plurality of overhead bits associated with them which are not stripped during the transmission process. According to the claimed invention, at least two input bit streams are divided into a plurality of sub-streams wherein the difference between the first bandwidth capacity and the bandwidth capacity of each of the at least two input bit streams is at least equal to the bandwidth capacity of one of the sub-streams. In this way, Applicant can transmit more of the sub-streams on the transmission channel, the number of these additional sub-

streams being equal to the extra bandwidth capacity of the transmission channel over the input bit streams.

In contrast, Mann et al describes a system in which he takes a DS-3 channel, divides it into a plurality of T-1 channels each of which has been stripped of its overhead bits, and transmits the T-1 channels through a D-3 transmission channel. However, due to the stripping of the overhead bits from the T-1 channels, he has extra bandwidth capacity on the transmission channel and can therefore put more T-1's through the DS-3 transmission channel. Accordingly, the input streams of Mann do not have a plurality of overhead bits associated therewith, as recited in claims 1 and 7. Further, there is no teaching in Mann that the difference between the first bandwidth capacity and the bandwidth of each of the input bit streams is at least equal to the bandwidth of the sub-streams.

Additionally, Mann et al does not disclose providing at least two input bit streams each having a transmission rate less than that of the first transmission rate, since the input bit streams of Mann et al have transmission rates which are the same as the first transmission rate, i.e. both are DS-3 channels.

For at least these reasons, Applicant respectfully submits that claims 1 and 7 are patentable over the Mann et al patent.

Claims 2, 3 and 8 depend from and include the recitations of claims 1 and 7. Accordingly, Applicant respectfully submits that these claims are patentable in and of themselves and as they depend from and include the recitations of claims 1 and 7 which are patentable for the reasons discussed above.

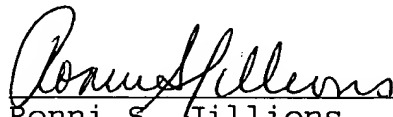
Applicant notes with appreciation the indication that claims 4-6 are allowable over the prior art of record.

In view of the above amendments and remarks, Applicant respectfully requests entry of the proposed amendment and reconsideration and withdrawal of the outstanding rejections of record. Applicant respectfully submits that the application will be in condition for allowance upon entry of the proposed amendment. Early notice to this effect is most earnestly solicited.

If the Examiner has any questions, he is invited to contact the undersigned at (202) 628-5197.

Respectfully submitted,

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